

it is known that South River contains significant aquatic habitat, both in terms of water quality and in terms of the aquatic plants and animals it supports. The loss of aquatic communities in North Carolina rivers is often not as apparent as the loss of terrestrial communities. Freshwater mussels were formerly so abundant that they provided a major wildlife food source, and their natural filtering mechanism helped to cleanse the waters. But recent field studies have documented precipitous declines in the populations of many of North Carolina's mussel species. There are several potential causes, including increased sedimentation, decreased dissolved oxygen due to increased nutrient input, and pollutants such as chlorine from wastewater treatment plants.

The South River contains significant aquatic habitat for rare species of fishes, including the Federal and State Species of Concern broadtail madtom (*Noturus* species 1) and State Special Concern thinlip chub (*Cyprinella* species 1). In addition to the rare animal populations, the aquatic habitat supports many species of waterfowl, water snakes, and fishes.

MANAGEMENT AND PROTECTION: This site is North Carolina public waters, and it is afforded official protection as an Outstanding Resource Water. Nevertheless, protection of aquatic habitat is often difficult because it is affected by activities throughout a watershed. Several actions can be taken to improve and protect water quality and the habitat within the river, such as by establishing and maintaining wide, undisturbed forested buffers along both banks of the river, by limiting amounts of impervious surface throughout the watershed, by reducing non-point source pollution through careful control of sedimentation and stormwater runoff, and by conversion of effluent treatment from chlorine to UV disinfection. In order to be effective, water quality protection is needed not only for the area that contains the significant biological resources, but should also be considered for all upstream areas.

NATURAL COMMUNITIES: Riverine blackwater aquatic community (NC NHP has not yet developed an aquatic natural community classification).

RARE PLANTS: None known (in the river itself).

RARE ANIMALS: Vertebrates - broadtail madtom (*Noturus* species1), thinlip chub (*Cyprinella* species 1).

REFERENCES:

- NC DENR. 1993. Report of Proceedings for the Proposed Outstanding Resource Waters Designation of the Black River and Portions of the South River and Six Runs Creek (Sampson, Bladen, Cumberland, Pender and Duplin Counties). N.C. Environmental Management Commission, DENR, Raleigh, N.C.
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